



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/826,687

04/16/2004

David Leon

944-001.108-1

9596

4955

7590

12/16/2009

WARE FRESSOLA VAN DER SLUYS & ADOLPHSON, LLP
BRADFORD GREEN, BUILDING 5
755 MAIN STREET, P O BOX 224
MONROE, CT 06468

EXAMINER

ALAM, UZMA

ART UNIT

PAPER NUMBER

2457

MAIL DATE

DELIVERY MODE

12/16/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/826,687	Applicant(s) LEON ET AL.	
	Examiner UZMA ALAM	Art Unit 2457	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9/15/09.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7,9-17,19-34 and 36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7,9-34 and 36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is responsive to the arguments filed September 15, 2009. Claims 1-7, 9-17, 19-34 and 36 are pending.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-5, 9, 11-15, 17, 19-24 and 26-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Ravi et al. US Patent No. 6,292,834. Ravi et al. teaches transmitting streams over a multimedia network (see abstract).

As per claim 1, Ravi teaches a method comprising:

defining in a client in a multimedia streaming network (network 290) at least one parameter (performance variable 410) for determining a rate adaptation operating range (range of bit rate values; column 7, lines 13-15), wherein the streaming network comprises a server configured for providing streaming data to the client, the client having a receiver buffer (playout buffer 366) for storing at least part of the streaming data to the client, the client having a receiver buffer for storing at least part of the streaming data to compensate for a difference between data transmission amount by the server and usage amount of the streaming data by the client so as to

Art Unit: 2457

allow the client to have sufficient amount of streaming data to play out in a non-disruptive manner, and wherein the rate adaption operating range is used for rate adaptation between the server and the client (column 6, lines 31-60; column 7, lines 1-25);

providing to the server information indicative of said at least one parameter (play time and delta play time Figure 7A 710, 730; column 8, lines 26-35);

adapting in the server the data amount to a reception rate based on said at least one parameter, (column 6, lines 33-47; increase or decrease bandwidth based on performance variables; column 7, lines 16-25; computing and adjusting playtime; column 8, lines 26-45); and

adjusting in the client packet transfer delay variation based on said adapting wherein said at least one parameter comprises a shift amount in time indicative of a difference between a sampling time and a transmission time of a packet at the server (Ravi incorporate s by reference Application Serial No. 08/818,826, now Wang et al. US Patent No. 5,903,673 (herein referred to as "Wang"). This reference teaches transmitting a frame based on network conditions. Ravi teaches providing the server with information relating to the bandwidth available in the network. The server than transmits the stream at a rate based on the information that is provided by the client. Ravi teaches difference between a sampling time and transmission time of a packet at the sever in the incorporated reference Wang – control adds to the cumulative bandwidth balance amount of bandwidth time consumed by current frame... column 10, lines 1-67).

As per claim 2, Ravi teaches a method according to claim 1, wherein said shift amount is substantially equal to said difference so as to allow the server to carry out said adapting based on the minimum shift amount (decrease bandwidth threshold 512; column 7, lines 35-45, Wang;

Art Unit: 2457

column 10, lines 1-20).

As per claim 3, Ravi teaches a method according to claim 1, wherein said shift amount is greater than said difference so as to allow the server to carry out said adapting based on the shift amount (delta playtime and shift amount; column 8, lines 36-65).

As per claim 4, Ravi teaches a method according to claim 1, wherein said at least one parameter comprises a number specifying a maximum difference between the number of bytes that has been sent and the number of bytes that have been sampled so as to allow the server to carry out said adapting based on the number (upper bandwidth threshold; column 8, lines 1-35).

As per claim 5, Ravi teaches a method according to claim 1, further comprising adapting a sampling rate to the transmission rate in the server based on said at least one parameter (performance variables; column 7, lines 26-34).

As per claim 9, Ravi teaches a method according to claim 1, wherein said adapting comprises an adjustment of Ravi's transmission rate and a sampling rate (column 7, lines 35-60; column 8, lines 26-45).

Claims 11-15, 17, 19, 20, 21-24 and 26-31 are rejected under the same rationale as claims 1-5 and 9 because they disclose a system, software code, terminal and network element employing the method of claims 1-5 and 9.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6-7, 10, 16, 25 and 32-34 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ravi US Patent No. 6,292,834 in view of Nilsson et al. US Patent Publication No. 2005/0172028. Nilsson teaches the invention as claimed including a data streaming method (See abstract).

As per claim 6, Ravi teaches a method comprising:

defining in a client in a multimedia streaming network (network 290) at least one parameter (performance variable 410) for determining a rate adaptation operating range (range of bit rate values; column 7, lines 13-15), wherein the streaming network comprises a server configured for providing streaming data to the client, the client having a receiver buffer (playout buffer 366) for storing at least part of the streaming data to the client, the client having a receiver buffer for storing at least part of the streaming data to compensate for a difference between data transmission amount by the server and usage amount of the streaming data by the client so as to allow the client to have sufficient amount of streaming data to play out in a non-disruptive manner, and wherein the rate adaption operating range is used for rate adaptation between the server and the client (column 6, lines 31-60; column 7, lines 1-25);

Art Unit: 2457

providing to the server information indicative of said at least one parameter (play time and delta play time Figure 7A 710, 730; column 8, lines 26-35);

adapting in the server the data amount to a reception rate based on said at least one parameter, (column 6, lines 33-47; increase or decrease bandwidth based on performance variables; column 7, lines 16-25; computing and adjusting playtime; column 8, lines 26-45); and

Ravi does not teach adjusting in the client packet transfer delay variation based on said adapting wherein said at least one parameter comprises a shift amount in time indicative of a clock drift between the server and the client. Nilsson teaches notifying of a clock drift. See paragraphs 0133-0134. It would have been obvious to a person of ordinary skill in the art at the time of the invention to combine the shift of Ravi with the clock drift of Nilsson. A person of ordinary skill in the art would have been motivated to do this to prevent a buffer overrun (see Ravi abstract).

As per claim 7, Ravi and Nilsson teach a method according to claim 6, wherein said adapting comprises an adjustment of a transmission rate (Ravi adjusting bandwidth; column 7, lines 35-60).

As per claim 10, Ravi teaches a method according to claim 1. Ravi does not teach wherein said at least one parameter comprises: a number specifying a maximum difference between the number of bytes that has been sent and the number of bytes that have been sampled; and a clock shift amount, indicative of a clock drift between the client and the server. Nilsson

Art Unit: 2457

teaches notifying of a clock drift. See paragraphs 0133-0134. It would have been obvious to a person of ordinary skill in the art at the time of the invention to combine the shift of Ravi with the clock drift of Nilsson. A person of ordinary skill in the art would have been motivated to do this to prevent a buffer overrun (see Ravi abstract).

Claims 16, 25 and 32-34 and 36 are rejected under the same rationale as claims 6-7 and 10 because they disclose a system, software code, terminal and network element employing the method of claims 6-7 and 10.

Examiner has cited particular columns and line numbers and/or paragraphs and/or sections and/or page numbers in the reference(s) as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety, as potentially teaching, all or part of the claimed invention, as well as the context of the passage, as taught by the prior art or disclosed by the Examiner.

Response to Arguments

5. Applicant's arguments filed September 15, 2009 have been fully considered but they are not persuasive.

Applicant argues that the reference Ravi US Patent No. 6,292,834 does not teach adjusting a sampling rate of the streaming data. Examiner notes that Ravi incorporate s by

Art Unit: 2457

reference Application Serial No. 08/818,826, now Wang et al. US Patent No. 5,903,673 (herein referred to as "Wang"). This reference teaches encoding a signal. Ravi teaches providing the server with information relating to the bandwidth available in the network. The server then transmits the stream at a rate based on the information that is provided by the client. According to the present application, before transmittal of a stream, the data needs to be encoded by the server. This rate of encoding is called a sampling rate. Ravi teaches adjusting the encoding rate based on a given bandwidth in the incorporated reference Wang. Wang shows this in column 3, lines 53-67; column 9, lines 13-67; column 10; column 11, lines 1-43 and Figure 4. Wang, as incorporated by Ravi teaches the server adjusts the value of Quantization (Q) to encode the stream. This value of Q is adjusted based on a bandwidth level known by the server. Ravi teaches this bandwidth value is provided by the client. Adjusting the Q teaches adjusting the sampling rate of the streaming data.

Applicant argues that Nilsson does not teach the client sends to the server a parameter indicative of a shift amount in time indicative of a clock drift between the server and the client.

In response to applicant's argument, Nilsson teaches a clock drift in paragraph 0133. Nilsson teaches that a clock drift is noted by the amount the client's clock drifts in response to the server's clock.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 2457

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to UZMA ALAM whose telephone number is (571)272-3995. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571) 272-4001. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2457

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Uzma Alam

/U. A./

Examiner, Art Unit 2457

December 1, 2009

/ARIO ETIENNE/

Supervisory Patent Examiner, Art Unit 2457